Comparison of N acetyl cysteine and Theophylline In patients hospitalized with asthma exacerbation in Imam Khomeini Hospital of Ardabil

Abstract

Introduction: asthma is in fact the inflammatory response of the airways that prevents enough oxygen to go through and reach the lungs thus disordering the normal breathing. To treat asthma, many different types of drugs are used. In this study, we want to compare the effects of N acetyl cysteine and theophylline in preventing asthma attacks. To this end, we investigate the effects of these two drugs on the clinical factors such as the amount of coughs, wheezing , dyspnea, sputum, and the sleep of the patients. The aim is to choose the best drug, based on the results of this study, to control the asthma attacks in the most efficient manner.

Materials and Methods: In this case control study, 100 patients have been chosen and divided to two groups of 50. In addition to the routine treatments of asthma, for the first group of patients, N acetyl cysteine has been prescribed, and for the second group of patients theophylline has been prescribed. The measured data has been analyzed using the software SPSS20.

Results: %78 of the patients were between 30 and 60 years old. %59 of the patients were women. %58 of the patients were being treated because they had hard breathing while others were being treated for lips cyanosis, wheezing, or other reasons. %41 of the patients were treated 3 to 5 days, %31 for more than 5 days, and %28 for less than 3 days. Theophylline was significantly more effective in reducing the hard breathing than N acetyl cysteine. However, theophylline and N acetyl cysteine didn't have a considerable difference in treating other symptoms.

Discussion and Conclusion: The results of this study show that both theophylline and N acetyl cysteine are effective in the treatment of asthma corroborating the well-known studies in this field. However, we found that theophylline can be more effective in treating asthma than N acetyl cysteine , since it reduces the hard breathing more effectively.

Keywords: Theophylline, N acetyl cysteine , asthma attack.